

# EXPONENTIAL NOTATION

$3^2$  ← exponent - tells how many times to multiply the base as a factor  
↑  
base  
"3 to the 2nd power"  
"3 squared"

$3^2$  - exponential notation (expression as a power)

$3 \times 3$  - expanded form

9 - value.

$4^3$  "4 to the 3rd power" or "4 cubed"

$$\begin{array}{r} 4 \cdot 4 \cdot 4 \\ \hline 16 \cdot 4 \\ 64 \end{array}$$

## Powers of 10

$10^0 = 1$  (any # to the zero power = 1)

$$10^1 = 10$$

$$10^2 = 10 \cdot 10 = 100$$

$$10^3 = 1,000$$

$$2 \times 10^2 = 200$$

$$\begin{array}{l} 2 \cdot 10 \cdot 10 \\ 2 \cdot 100 \\ 200 \end{array}$$